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WORKING PAPER NUMBER 85-12

An Inventory of Vehicles Traversing the  
Lower Roadway at O'Hare International Airport

Ed Christopher  
Associate Project Engineer

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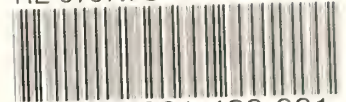
AUG 1985

NORTHWESTERN UNIVERSITY

**Chicago Area Transportation Study**

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An Inventory of Vehicles Traversing the  
Lower Roadway at O'Hare International Airport

Ed Christopher, Associate Project Engineer

ABSTRACT

This report summarizes traffic classification counts taken on the lower roadway at O'Hare International Airport. The lower roadway serves passengers departing the airport. The counts were taken for a fifteen hour period on Tuesday, June 25, 1985 and again on Friday, August 23, 1985. Of particular interest is the mix of taxi, livery, courtesy vehicle, bus and private auto traffic utilizing the airport on the surveyed days.

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## Introduction

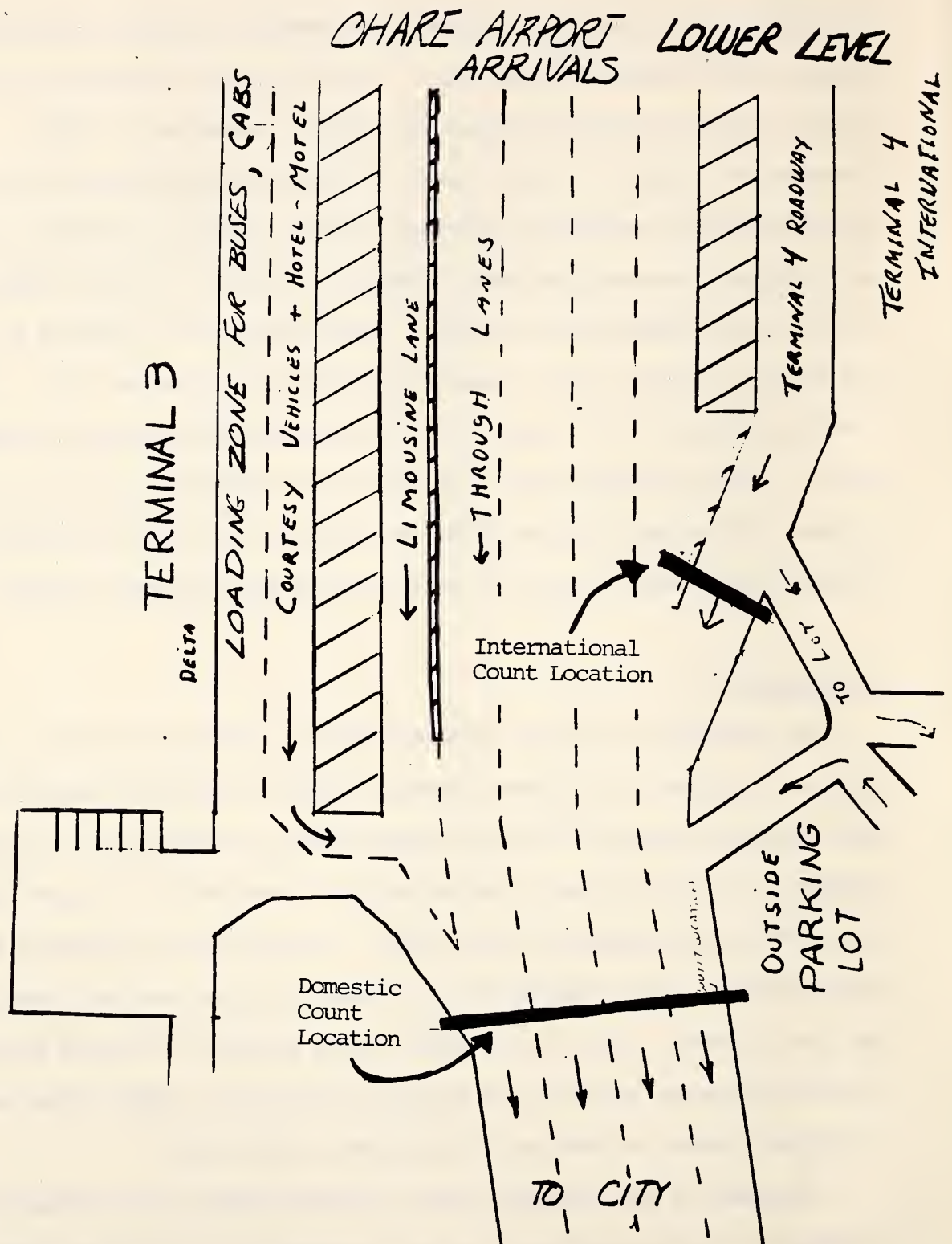
In July 1985 the City of Chicago, Department of Aviation established the O'Hare Traffic Management Task Force. The aim of the task force is to take action towards alleviating roadway and parking congestion at O'Hare International Airport. In an attempt to assist the task force, CATS staff, at the direction of the Private Providers Steering Committee conducted counts of all vehicles traversing the lower roadway at O'Hare. The lower roadway is used for trips departing the airport. These counts were conducted as a follow-up to similar counts taken in May 1984 and presented in (1). The counts presented in this report were taken on two different days: Tuesday, June 25, 1985 and Friday, August 23, 1985. The time frame for the counts was between 7:00 AM and 10:00 PM except where noted. All types of vehicles departing the lower roadway at O'Hare on these two dates were counted.

## Count Location

For both days the counts were recorded and tabulated each hour at two separate locations on the lower roadway. Figure 1 shows the count locations. Both locations were on the lower roadway before its merger with the upper roadway. O'Hare's two level roadway system is designed to segregate departing and arriving air passenger ground traffic. Departing air passengers are directed to the upper roadway while arriving air passengers are directed to the lower roadway. The lower roadway is used primarily for those vehicles serving passengers departing the airport although this roadway also carries a significant number of vehicles circling the terminal area.

The need for two different count locations arose from the temporary placement of the International Terminal (Terminal 4) in the lower level of the parking garage. The primary purpose of these counts was to identify

Figure 1: O'HARE AIRPORT COUNT LOCATIONS



the traffic volumes of vehicles serving arriving air passengers. Since the new international terminal roadway serves both arriving and departing air passengers it was necessary to conduct separate counts of the vehicles departing the international roadway.

#### Commercial Vehicle Classification

Separate tallies were kept for ten classifications of vehicles including:

- |                        |                        |
|------------------------|------------------------|
| 1. Chicago Taxicabs    | 6. Courtesy Vehicles   |
| 2. Suburban Taxicabs   | 7. Rent-A-Car Shuttles |
| 3. Chicago Limousines  | 8. Airport Shuttles    |
| 4. Suburban Limousines | 9. Commercial Buses    |
| 5. Passenger Cars      | 10. All Other Vehicles |

In addition to the number of vehicles the passengers per vehicle were recorded for the first four vehicle types during both the June and August counts. Vehicle occupancy was also recorded for passenger cars during the August counts. However, the passengers per vehicle were not recorded for passenger cars during the June counts.

The following sections provide a brief explanation of each of the vehicle classifications.

#### **Chicago Taxicabs.**

These vehicles were identified by their license plates, medallions and the number painted on the cars. For Chicago taxicabs the number on the license plate always corresponds to the number painted on the vehicle. Chicago taxicabs also carry a 4 inch square metal tag (medallion) bolted to the right side of the hood. Only Chicago taxicabs have medallions.

#### Suburban Taxicabs.

It was assumed that all vehicles with taxicab license plates not carrying a medallion or other Chicago marking were suburban taxicabs.

#### Chicago Limousines.

These vehicles were identified by their license plates. Besides having a special livery license plate, all Chicago licensed limousines have the number "7" at the beginning of their license plate number.

#### Suburban Limousines.

All other limousines displaying a livery license plate not starting with the number "7" were assumed to be suburban limousines.

#### Passenger Cars.

This classification included all private vehicles, cars, station wagons, passenger vans and pick-up trucks having an Illinois passenger car license plate.

#### Courtesy Vehicles.

Vehicles in this class include the hotel and motel shuttle vehicles. These vehicles range from small buses and vans to station wagons and passenger cars. These vehicles were identified by their markings which indicate the hotel or service organization sponsoring the vehicle.

#### Rent-A-Car Shuttles.

This group includes those vehicles owned and/or operated by car rental companies which provide a shuttle service for their clients to/from the terminals and the rent-a-car locations. Both on and off field rent-a-car shuttles were counted in this group. Typically the vehicles are small buses with the name of the company painted on the side. As with the courtesy vehicles this group included small buses, vans, station wagons and passenger cars.



#### Airport Shuttles.

Counted here were vehicles providing free shuttle services around the airport property and which were clearly marked "free airport shuttle." These include employee shuttles, terminal shuttles, and the shuttle buses serving the remote parking lots.

#### Commercial Buses.

This category includes all the for-hire buses operating to/from O'Hare. Examples of buses in this group are CTA, RTA, Greyhound, Continental, Tri-State, and those buses providing regional services. Buses operating as charters are also included in this group.

#### Other Vehicles.

This group consists of tow-trucks, police and fire vehicles, construction vehicles, motorcycles, military and any other vehicle not falling into one of the above categories.

#### Hourly Counts

Summaries of the vehicles counted on Tuesday, June 25, 1985 are provided in Appendix A, Tables A1 thru A12. Summaries of the counts taken Friday, August 23, 1985 are presented in Appendix B, Tables B1 Thru B14.

These counts represent the best available data on the mix of vehicles serving the airport. The Tuesday date was chosen as representative of a typical weekday. On the other hand, the Friday date is more accurately characterized as a peak weekend day. However, it should be noted that since this data represents only two data points it is difficult to develop valid comparisons between the two days. Therefore, this paper will presents only a profile of the vehicles serving the airport on the days studied. The number

and share of vehicles in each category on the two count days is presented in Table 1.

As Table 1 shows there were significantly more autos observed on the lower roadway on Friday, August 23, 1985 than were observed on Tuesday, June 25. Given the fact that 56% of these autos contained only a driver a possible explanation for the increased traffic is that more of these vehicles were circulating around the airport while waiting for their passengers to arrive. Unfortunately auto occupancy for the June counts was not measured. Nor were vehicle occupancies measured for the hotel/motel, rent-a-car, airport shuttle, commercial bus and other categories.

Table 2 presents the number of vehicles traversing the lower roadway which were carrying passengers on each of the survey dates. That is, the driver only taxis and limousines and the August 23 driver only autos have been excluded from Table 2. This should present a slightly truer picture of the mix of vehicles actually departing the lower roadway. It should be noted, however, that reducing the number of autos for the Friday counts by the number of driver only vehicles while not performing the same adjustment on the Tuesday data will affect the mix of vehicles being shown.

Further, the City of Chicago changed some of the operating procedures at the airport between the two count dates which could affect the vehicle mix observed there. Foremost among these changes was the addition of more police whose primary purpose was to keep traffic, especially the passenger cars, moving. It is likely that this increased enforcement resulted in a greater number of passenger cars circulating the lower level than there were before the additional police were added. Whereas in June the private auto driver might prefer to park or stand illegally at the curb, in August this driver

Table 1: TOTAL NUMBER OF VEHICLES  
TRAVERSING THE LOWER ROADWAY

	Tuesday	Friday
	<u>June 25, 1985</u>	<u>August 23, 1985</u>
Chicago Limousines	187 ( 1%)	270 ( 1%)
City Taxicabs	2,606 ( 20%)	2704 ( 13%)
Suburban Limousines	1,906 ( 14%)	2114 ( 10%)
Sub Taxicabs	543 ( 4%)	714 ( 4%)
Passenger Cars	4,984 ( 37%)	11,390 ( 56%)
Courtesy Vehicles	905 ( 7%)	697 ( 3%)
Rent-A-Car Shuttles	1,313 ( 10%)	1,333 ( 7%)
Airport Shuttles	209 ( 2%)	321 ( 2%)
Commercial Buses	346 ( 3%)	307 ( 1%)
Other Vehicles	<u>347 ( 3%)</u>	<u>629 ( 3%)</u>
Total	13,346 (100%)	20,479 (100%)

NOTES: Table excludes those vehicles using the International  
Terminal (Terminal 4) Roadway.

These counts represent the 15 hour totals for the  
time period from 7:00 AM to 10:00 PM on each day.

Table 2: TOTAL NUMBER OF VEHICLES  
TRAVERSING THE LOWER ROADWAY MINUS  
DRIVER ONLY CABS, LIMOS, AND AUGUST 23 AUTOS

	Tuesday	Friday
	<u>June 25, 1985</u>	<u>August 23, 1985</u>
Chicago Limousines	120 ( 1%)	238 ( 2%)
Chicago Taxicabs	1,980 (16%)	1,919 (15%)
Suburban Limousines	1,422 (12%)	1,904 (15%)
Suburban Taxicabs	314 ( 3%)	385 ( 3%)
Passenger Cars	4,984 (42%)	5,108 (39%)
Courtesy Vehicles	905 ( 8%)	697 ( 5%)
Rent-A-Car Shuttles	1,313 (11%)	1,333 (10%)
Airport Shuttles	209 ( 2%)	321 ( 3%)
Commercial Buses	346 ( 3%)	307 ( 2%)
Other Vehicles	<u>347 ( 3%)</u>	<u>627 ( 5%)</u>
Total	11,940 (100%)	12,749 (100%)

would be more likely to receive a ticket or tow by doing so and therefore more likely to circulate as he/she waited to pick-up passengers.

Based upon the above data the following mix of vehicles can be expected on the lower roadway::

Chicago Limousines	1% - 2%	Courtesy Vehicles	3% - 8%
Chicago Taxicabs	13% - 20%	Rent-A Car Shuttles	7% - 10%
Suburban Limousines	10% - 15%	Airport Shuttles	1% - 3%
Suburban Taxicabs	3% - 4%	Commercial Buses	2% - 3%
Passenger Cars	37% - 56%	Other Vehicles	3% - 5%

#### Other Observations

1. The number of vehicles traversing the lower roadway remained relatively the same for both days with the exception of passenger cars. This could indicate that the ground transport choice of the regular or business traveler is relatively constant. The June data represents a normal business day. The August data undoubtedly is inflated by a larger number of vacation or recreational travelers.
2. The vehicle types showing the greatest changes were: 1) passenger cars, 2) Chicago taxicabs, suburban limousines, and, to a lesser extent, courtesy vehicles and the rent-a-car and airport shuttles.
3. Empty circulating vehicles still represent a significant share of the lower roadway traffic at O'Hare as shown in Table 3.
4. Both Chicago and suburban limousines carry more passengers per vehicle than the overall average occupancy as indicated in Table 4. This may be explained by the tendency to multiple load among these carriers as compared with the other operators at the airport.

Table 3: PERCENTAGE OF DRIVER ONLY VEHICLES

WITHIN EACH CATEGORY

	Tuesday	Friday
	<u>June 25, 1985</u>	<u>August 23, 1985</u>
Chicago Limousines	36%	12%
Chicago Taxicabs	16%	29%
Suburban Limousines	27%	10%
Suburban Taxicabs	42%	46%
Passenger Cars	NA	56%



Table 4: PASSENGERS CARRIED PER VEHICLE FOR THE  
TAXICABS AND LIMOUSINES

	Tuesday	Friday
	<u>June 25, 1985</u>	<u>August 23, 1985</u>
Chicago Limousines	1.48	1.66
Chicago Taxicabs	1.40	1.46
Suburban Limousines	1.49	1.62
Suburban Taxicabs	1.32	1.23
Overall Average	1.43	1.52

### References

- (1) Christopher, Ed. Analysis of Taxis and Limousines Departing From O'Hare International Airport, Working Paper Number 84-10, CATS, June 1984.

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**Appendix A: Vehicle Counts for Tuesday, June 25, 1985**

**Appendix B: Vehicle Counts for Friday, August 23, 1985**

**Appendix A: Vehicle Counts for Tuesday, June 25, 1985**

**Table A1: TOTAL NUMBER OF LIMOUSINES AND TAXIS  
EXITING THE LOWER ROADWAY BY HOUR**

HOUR	CITY LIMO	CITY TAXI	SUB LIMO	SUB TAXI	TOTAL
7:00 AM	9	57	62	28	156
8:00 AM	20	199	97	36	352
9:00 AM	11	238	97	36	382
10:00 AM	3	205	91	23	322
11:00 AM	5	152	95	32	284
12:00 NOON	3	173	101	37	314
1:00 PM	7	120	108	17	252
2:00 PM	7	189	123	38	357
3:00 PM	21	199	148	29	397
4:00 PM	24	144	137	43	348
5:00 PM	13	176	159	41	389
6:00 PM	8	221	241	45	515
7:00 PM	21	194	182	55	452
8:00 PM	13	175	169	47	404
9:00 PM	22	164	150	36	372
15 HOUR TOTAL	187	2606	1960	543	5296
PERCENT	3.5%	49.2%	37.0%	10.2%	99.9%

NOTE: Table excludes those limousines and taxicabs using the International Terminal (Terminal 4) Roadway.

Tuesday, June 25, 1985

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Table A2: NUMBER OF LIMOUSINES AND TAXIS WITH PASSENGERS  
EXITING THE LOWER ROADWAY BY HOUR

HOUR	CITY LIMO	CITY TAXI	SUB LIMO	SUB TAXI	TOTAL
7:00 AM	3	39	23	4	69
8:00 AM	8	161	67	22	258
9:00 AM	6	162	62	19	249
10:00 AM	2	133	64	13	212
11:00 AM	4	93	58	19	174
12:00 NOON	3	121	68	7	199
1:00 AM	7	111	88	15	221
2:00 PM	7	147	77	19	250
3:00 PM	10	140	101	12	263
4:00 PM	14	98	93	23	228
5:00 PM	10	138	135	24	307
6:00 PM	8	184	192	38	422
7:00 PM	14	162	137	38	351
8:00 PM	11	148	138	32	329
9:00 PM	13	143	119	29	304
15 HOUR TOTAL	120	1980	1422	314	3836
PERCENT	3.1%	51.6%	37.1%	8.2%	100.0%

NOTE: Table excludes those limousines and taxicabs using the  
International Terminal (Terminal 4) Roadway.

Tuesday, June 25, 1985

Table A3: NUMBER OF LIMOUSINES AND TAXIS  
WITHOUT PASSENGERS EXITING THE LOWER ROADWAY BY HOUR

HOUR	CITY LIMO	CITY TAXI	SUB LIMO	SUB TAXI	TOTAL
7:00 AM	6	18	39	24	87
8:00 AM	12	38	30	14	94
9:00 AM	5	76	35	17	133
10:00 AM	1	72	27	10	110
11:00 AM	1	59	37	13	110
12:00 NOON	0	52	33	30	115
1:00 AM	0	9	20	2	31
2:00 AM	0	42	46	19	107
3:00 PM	11	59	47	17	134
4:00 PM	10	46	44	20	120
5:00 PM	3	38	24	17	82
6:00 PM	0	37	49	7	93
7:00 PM	7	32	45	17	101
8:00 PM	2	27	31	15	75
9:00 PM	9	21	31	7	68
15 HOUR TOTAL.	67	626	538	229	1460
PERCENT	4.6%	42.9%	36.8%	15.7%	100.0%

NOTE: Table excludes those limousines and taxicabs using the  
International Terminal (Terminal 4) Roadway.

Tuesday, June 25, 1985

Table A4: NUMBER OF LIMOUSINE AND TAXI VEHICLES EXITING THE LOWER  
ROADWAY BY PASSENGER LOADS

NUMBER OF PASSENGER PER VEHICLE	CITY LIMO	CITY TAXI	SUB LIMO	SUB TAXI	TOTAL
1	79	1365	856	237	2537
2	29	463	452	56	1000
3	8	124	99	17	248
4+	4	28	15	4	51
SUB TOTAL	120	1980	1422	314	3836
DRIVER ONLY	67	626	538	229	1460
TOTAL	187	2606	1960	543	5296
PERCENT EMPTY	36%	16%	27%	42%	28%
AVERAGE PASS/VEH.	1.48	1.40	1.49	1.32	1.43

NOTE: Table excludes those vehicles serving the International  
Terminal (Terminal 4)

Average number of passengers per vehicle excludes the driver only  
vehicles.

Tuesday, June 25, 1985.

Table A5: NUMBER OF PASSENGERS CARRIED BY LIMOUSINES AND  
TAXIS EXITING THE LOWER ROADWAY

NUMBER OF PASSENGERS VEHICLE	CITY LIMO	CITY TAXI	SUB LIMO	SUB TAXI	TOTAL
1	79 (44%)	1365 (49%)	856 (40%)	237 (57%)	2537 ( 46%)
2	58 (33%)	926 (33%)	904 (43%)	112 (27%)	2000 ( 36%)
3	24 (13%)	372 (13%)	297 (14%)	51 (12%)	744 ( 14%)
4+	17 (10%)	114 ( 4%)	62 ( 3%)	16 ( 4%)	209 ( 4%)
TOTAL	178 ( 3%)	2777 (50%)	2119 (39%)	416 ( 8%)	5490 (100.%)

NOTE: Table excludes those passengers carried by limousines and taxis  
using the International Terminal (Terminal 4) Roadway.

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Table A6: TOTAL NUMBER OF LIMOUSINES AND TAXIS  
EXITING THE INTERNATIONAL TERMINAL ROADWAY BY HOUR

HOUR	CITY LIMO	CITY TAXI	SUB LIMO	SUB TAXI	TOTAL
7:00 AM	(5)	(52)	(15)	(12)	(84)
8:00 AM	3	25	6	13	47
9:00 AM	11	59	2	5	77
10:00 AM	4	45	4	16	69
11:00 AM	3	41	11	9	64
12:00 NOON	5	24	13	8	50
1:00 PM	3	40	4	13	60
2:00 PM	5	40	15	15	75
3:00 PM	2	54	24	21	101
4:00 PM	6	79	37	17	139
5:00 PM	7	68	35	12	122
6:00 PM	9	57	20	11	97
7:00 PM	1	83	22	12	118
8:00 PM	5	83	15	7	110
9:00 PM	0	32	8	8	48
15 HOUR TOTAL	69	782	231	179	1261
PERCENT	5.4%	62.0%	18.3%	14.2%	99.9%

NOTE: Numbers in parenthesis represent a simple average  
of the 14 hours for which counts were taken.

Tuesday, June 25, 1985.

Table A7: NUMBER OF LIMOUSINES AND TAXIS  
WITH PASSENGERS EXITING THE  
INTERNATIONAL TERMINAL ROADWAY BY HOUR

HOUR	CITY LIMO	CITY TAX	SUB LIMO	SUB TAXI	TOTAL
7:00 AM	(1)	(18)	(7)	(4)	(30)
8:00 AM	0	10	4	5	19
9:00 AM	5	12	1	2	20
10:00 AM	2	9	1	3	15
11:00 AM	2	16	4	2	24
12:00 NOON	0	2	3	3	8
1:00 PM	1	5	1	3	10
2:00 PM	0	7	6	3	16
3:00 PM	1	34	9	9	53
4:00 PM	3	41	18	1	63
5:00 PM	3	39	25	6	73
6:00 PM	1	19	7	5	32
7:00 PM	0	21	13	4	38
8:00 PM	3	18	7	2	30
9:00 PM	0	14	6	4	24
15 HOUR TOTAL	22	265	112	56	455
PERCENT	4.8%	58.2%	24.6%	12.3%	99.9%

NOTE: Numbers in parenthesis represent a simple average  
of the 14 hours for which counts were taken.

Tuesday, June 25, 1985.



Table A8: NUMBER OF LIMOUSINES AND TAXIS  
WITHOUT PASSENGERS EXITING THE INTERNATIONAL  
TERMINAL ROADWAY BY HOUR

HOUR	CITY LIMO	CITY TAXI	SUB LIMO	SUB TAXI	TOTAL
7:00 AM	(3)	(34)	(8)	(8)	(53)
8:00 AM	3	15	2	8	28
9:00 AM	6	47	1	3	57
10:00 AM	2	36	3	13	54
11:00 AM	1	25	7	7	40
12:00 NOON	5	22	10	5	42
1:00 PM	2	35	3	10	50
2:00 PM	5	33	9	12	59
3:00 PM	1	20	15	12	48
4:00 PM	3	38	19	16	76
5:00 PM	4	29	10	6	49
6:00 PM	8	38	13	6	65
7:00 PM	1	62	9	8	80
8:00 PM	2	65	8	5	80
9:00 PM	0	18	2	4	24
15 HOUR TOTAL	46	517	119	123	805
PERCENT	5.7%	64.2%	14.8%	15.3%	100.0%

NOTE: Numbers in parenthesis represent a simple average  
of the 14 hours for which counts were taken.

Tuesday, June 25, 1985.

Table A9: NUMBER OF LIMOUSINES AND TAXIS EXITING  
THE INTERNATIONAL TERMINAL BY PASSENGERS LOADS

NUMBER PASSENGERS PER VEHICLE	CITY LIMO	CITY TAXI	SUB LIMO	SUB TAXI	TOTAL
1	10	124	48	31	213
2	10	97	28	17	152
3	1	16	15	3	35
4+	0	10	14	1	25
SUB TOTAL	21	247	105	52	425
DRIVER ONLY	43	483	111	115	752
TOTAL	64	730	216	167	1177
PERCENT EMPTY	67%	66%	51%	69%	64%
AVERAGE PASS/VEH.	1.57	1.65	1.99	1.50	1.71

NOTE: The average number of passengers per vehicle excludes the driver only vehicles.

This table represents only the 14 hours for which counts were taken. That is from 8:00 AM to 10:00 PM.

Tuesday, June 25, 1985.

Table A10: NUMBER OF PASSENGERS CARRIED BY  
LIMOUSINES AND TAXIS EXITING THE INTERNATIONAL TERMINAL

NUMBER PASSENGERS PER VEHICLE	CITY LIMO	CITY TAXI	SUB LIMO	SUB TAXI	TOTAL
1	10 (30%)	124 (30%)	48 (23%)	31 (40%)	213 (29%)
2	20 (61%)	194 (48%)	56 (27%)	34 (43%)	304 (42%)
3	3 ( 9%)	48 (12%)	45 (21%)	9 (12%)	105 (14%)
4+	0 ( 0%)	41 (10%)	60 (29%)	4 ( 5%)	105 (14%)
TOTAL	33 ( 4%)	407 (56%)	209 (29%)	78 (11%)	727(100%)

NOTE: This table represents only the 14 hours for which  
counts were taken. That is from 8:00 AM to 10:00 PM.

Tuesday, June 25, 1985

Table All: NUMBER OF VEHICLES EXITING THE LOWER ROADWAY BY HOUR

HOUR	AUTOS	OTHERS	HOTEL/MOTEL COURTESY CAR	RENTAL CAR SHUTTLES	AIRPORT SHUTTLE BUS	COMM BUS CTA, RTA, ETC.
7:00 AM	332	(23)	(60)	(88)	(14)	(23)
8:00 AM	313	(23)	(60)	91	(14)	(23)
9:00 AM	387	(23)	(60)	106	(14)	(23)
10:00 AM	289	(23)	(60)	85	(14)	(23)
11:00 AM	294	(23)	(60)	98	(14)	(23)
12:00 NOON	312	(23)	(60)	98	(14)	(23)
1:00 PM	369	(23)	(60)	86	(14)	(23)
2:00 PM	388	(23)	49	110	15	24
3:00 PM	342	27	56	77	13	28
4:00 PM	334	35	56	91	14	27
5:00 PM	301	41	67	94	15	21
6:00 PM	267	13	65	77	15	28
7:00 PM	372	21	56	72	7	21
8:00 PM	389	19	67	75	12	19
9:00 PM	295	7	69	65	20	17
TOTAL	4984	347	905	1313	209	346

NOTE: Table does not contain those vehicles using the roadway for the International Terminal (Terminal 4) Roadway.

Number in parenthesis represent a simple average of the hours for which counts were taken.

Tuesday, June 25, 1985.

Table A12: NUMBER OF VEHICLES EXITING THE  
INTERNATIONAL TERMINAL ROADWAY

HOUR	AUTOS	OTHERS	HOTEL/MOTEL COURTESY CAR	RENTAL CAR SHUTTLES	AIRPORT SHUTTLE BUS	COMM BUS CTA, RTA, ETC.
7:00 AM	(130)	(15)	(13)	(6)	(12)	(9)
8:00 AM	79	22	14	6	12	9
9:00 AM	106	19	10	7	8	7
10:00 AM	85	25	11	5	13	8
11:00 AM	86	22	8	1	15	10
12:00 NOON	71	13	8	2	13	8
1:00 PM	72	22	2	3	8	8
2:00 PM	87	21	8	10	19	10
3:00 PM	162	16	22	2	7	9
4:00 PM	257	8	17	3	10	15
5:00 PM	206	18	21	5	10	11
6:00 PM	180	7	19	5	9	13
7:00 PM	169	6	16	10	12	7
8:00 PM	160	10	18	15	20	5
9:00 PM	102	5	10	8	10	2
15 HOUR TOTAL	1952	229	197	88	178	131

NOTE: Numbers in parenthesis represent a simple average  
of the 14 hours for which counts were taken.

Tuesday, June 25, 1985.

**Appendix B: Vehicle Counts for Friday, August 23, 1985**

Table B1: TOTAL NUMBER OF LIMOUSINES AND TAXIS  
EXITING THE LOWER ROADWAY BY HOUR

HOUR	CITY LIMO	CITY TAXI	SUB LIMO	SUB TAXI	TOTAL
7:00 AM	5	60	39	18	122
8:00 AM	15	133	68	24	240
9:00 AM	11	139	58	19	227
10:00 AM	6	125	60	42	233
11:00 AM	28	125	91	33	277
12:00 NOON	11	95	117	27	250
1:00 PM	20	134	157	40	351
2:00 PM	17	160	190	73	440
3:00 PM	24	240	210	75	549
4:00 PM	21	225	213	56	515
5:00 PM	26	278	255	64	623
6:00 PM	27	293	226	81	627
7:00 PM	14	194	147	52	407
8:00 PM	26	271	115	55	467
9:00 PM	19	232	168	55	474
15 HOUR TOTAL	270	2704	2114	714	5802
PERCENT	4.6%	46.6%	36.4%	12.3%	99.9%

NOTE: Table excludes those limousines and taxicabs using the  
International Terminal (Terminal 4) Roadway.

Friday, August 23, 1985.



Table B2: NUMBER OF LIMOUSINES AND TAXIS WITH PASSENGERS  
EXITING THE LOWER ROADWAY BY HOUR

HOUR	CITY LIMO	CITY TAXI	SUB LIMO	SUB TAXI	TOTAL
7:00 AM	2	28	25	2	57
8:00 AM	7	82	53	16	158
9:00 AM	11	108	49	12	180
10:00 AM	6	80	52	11	149
11:00 AM	28	96	86	7	217
12:00 NOON	11	65	99	8	183
1:00 AM	14	104	130	16	264
2:00 PM	17	130	167	35	349
3:00 PM	22	178	187	48	435
4:00 PM	19	154	187	33	393
5:00 PM	25	222	245	48	540
6:00 PM	23	205	222	50	500
7:00 PM	11	130	138	34	313
8:00 PM	24	168	110	33	335
9:00 PM	18	169	154	32	373
15 HOUR TOTAL	238	1919	1904	385	4446
PERCENT	5.4%	43.2%	42.8%	8.7%	100.1%

NOTE: Table excludes those limousines and taxicabs using the  
International Terminal (Terminal 4) Roadway.

Friday, August 23, 1985.

Table B3: NUMBER OF LIMOUSINES AND TAXIS  
WITHOUT PASSENGERS USING THE LOWER ROADWAY BY HOUR

HOUR	CITY LIMO	CITY TAXI	SUB LIMO	SUB TAXI	TOTAL
7:00 AM	3	32	14	16	65
8:00 AM	8	51	15	8	82
9:00 AM	0	31	9	7	47
10:00 AM	0	45	8	31	84
11:00 AM	0	29	5	26	60
12:00 NOON	0	30	18	19	67
1:00 AM	6	30	27	24	87
2:00 AM	0	30	23	38	91
3:00 PM	2	62	23	27	114
4:00 PM	2	71	26	23	122
5:00 PM	1	56	10	16	83
6:00 PM	4	88	4	31	127
7:00 PM	3	64	9	18	94
8:00 PM	2	103	5	22	132
9:00 PM	1	63	14	23	101
15 HOUR TOTAL	32	785	210	329	1356
PERCENT	2.4%	57.9%	15.5%	24.2%	100.0%

NOTE: Table excludes those limousines and taxicabs using the International Terminal (Terminal 4) Roadway.

Friday, August 23, 1985.

Table B4: NUMBER OF LIMOUSINE AND TAXI VEHICLES EXITING THE LOWER  
ROADWAY BY PASSENGER LOADS

NUMBER OF PASSENGER PER VEHICLE	CITY LIMO	CITY TAXI	SUB LIMO	SUB TAXI	TOTAL
1	128	1257	1015	315	2715
2	77	486	640	57	1260
3	19	141	207	9	376
4+	14	35	42	4	95
SUB TOTAL	238	1919	1904	385	4446
DRIVER ONLY	32	785	210	329	1356
TOTAL	270	2704	2114	714	5802
PERCENT EMPTY	12%	29%	10%	46%	23%
AVERAGE PASS/VEH.	1.66	1.46	1.62	1.23	1.52

NOTE: Table excludes those vehicles serving the International  
Terminal (Terminal 4)

Average number of passengers per vehicle excludes the driver only  
vehicles.

Friday, August 23, 1985.

Table B5: NUMBER OF PASSENGERS CARRIED BY LIMOUSINES AND  
TAXIS EXITING THE LOWER ROADWAY

NUMBER OF PASSENGERS PER VEHICLE	CITY LIMO	CITY TAXI	SUB LIMO	SUB TAXI	TOTAL
1	128 (32%)	1257 (45%)	1015 (33%)	315 (67%)	2715 (40%)
2	154 (39%)	972 (35%)	1280 (42%)	114 (24%)	2520 (37%)
3	57 (14%)	423 (15%)	621 (20%)	27 ( 6%)	1128 (17%)
4+	56 (14%)	140 ( 5%)	168 ( 5%)	16 ( 3%)	380 ( 6%)
TOTAL	395 ( 6%)	2792 (41%)	3084 (46%)	472 ( 7%)	6743 (100.%)

NOTE: Table excludes those passengers carried by limousines and taxis using the International Terminal (Terminal 4) Roadway.

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Table B6: TOTAL NUMBER OF LIMOUSINES AND TAXIS  
EXITING THE INTERNATIONAL TERMINAL ROADWAY BY HOUR

HOUR	CITY LIMO	CITY TAXI	SUB LIMO	SUB TAXI	TOTAL
7:00 AM	3	24	8	7	42
8:00 AM	1	23	10	13	47
9:00 AM	0	31	0	14	45
10:00 AM	3	23	5	24	55
11:00 AM	2	26	1	16	45
12:00 NOON	3	34	2	7	46
1:00 PM	5	32	14	17	68
2:00 PM	8	65	10	11	94
3:00 PM	4	56	10	20	90
4:00 PM	5	60	15	21	101
5:00 PM	8	73	33	13	127
6:00 PM	18	84	18	11	131
7:00 PM	10	111	5	7	133
8:00 PM	3	94	5	19	121
9:00 PM	1	54	0	7	62
15 HOUR TOTAL	74	790	136	207	1207
PERCENT	6.1%	65.5%	11.3%	17.1%	100.0%

Friday, August 23, 1985.

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Table B7: NUMBER OF LIMOUSINES AND TAXIS  
WITH PASSENGERS EXITING THE  
INTERNATIONAL TERMINAL ROADWAY BY HOUR

HOUR	CITY LIMO	CITY TAX	SUB LIMO	SUB TAXI	TOTAL
7:00 AM	1	5	3	1	10
8:00 AM	1	7	4	0	12
9:00 AM	0	2	0	1	3
10:00 AM	1	3	0	2	6
11:00 AM	1	5	1	2	9
1200 NOON	0	2	0	0	2
1:00 PM	2	14	8	10	34
2:00 PM	0	13	2	1	16
3:00 PM	0	21	0	3	24
4:00 PM	0	27	2	8	37
5:00 PM	6	51	16	5	78
6:00 PM	3	14	6	2	25
7:00 PM	1	15	0	1	17
8:00 PM	0	24	3	5	32
9:00 PM	1	8	0	0	9
15 HOUR TOTAL	17	211	45	41	314
PERCENT	5.4%	67.2%	14.3%	13.1%	100.0%

Friday, August 23, 1985.

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Table B8: NUMBER OF LIMOUSINES AND TAXIS  
WITHOUT PASSENGERS EXITING THE INTERNATIONAL  
TERMINAL ROADWAY BY HOUR

HOUR	CITY LIMO	CITY TAXI	SUB LIMO	SUB TAXI	TOTAL
7:00 AM	2	19	5	6	32
8:00 AM	0	16	6	13	35
9:00 AM	0	29	0	13	42
10:00 AM	2	20	5	22	49
11:00 AM	1	21	0	14	36
12:00 NOON	3	32	2	7	44
1:00 PM	3	18	6	7	34
2:00 PM	8	52	8	10	78
3:00 PM	4	35	10	17	66
4:00 PM	5	33	13	13	64
5:00 PM	2	22	17	8	49
6:00 PM	15	70	12	9	106
7:00 PM	9	96	5	6	116
8:00 PM	3	70	2	14	89
9:00 PM	0	46	0	7	53
15 HOUR TOTAL	57	579	91	166	893
PERCENT	6.4%	64.8%	10.2%	18.6%	100.0%

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Table B9: NUMBER OF LIMOUSINES AND TAXIS EXITING  
THE INTERNATIONAL TERMINAL BY PASSENGERS LOADS

NUMBER PASSENGERS PER VEHICLE	CITY LIMO	CITY TAXI	SUB LIMO	SUB TAXI	TOTAL
1	11	112	18	19	160
2	4	78	11	15	108
3	1	12	11	3	27
4+	1	9	5	4	19
SUB TOTAL	17	211	45	41	314
DRIVER ONLY	57	579	91	116	843
TOTAL	74	790	136	207	1207
PERCENT EMPTY	77%	73%	67%	56%	70%
AVERAGE PASS/VEH.	1.53	1.61	2.06	1.80	1.70

Note: The average number of passengers per vehicle excludes the driver only vehicles.

Friday, August 23, 1985.

Table B10: NUMBER OF PASSENGERS CARRIED BY  
LIMOUSINES AND TAXIS EXITING THE INTERNATIONAL TERMINAL

NUMBER PASSENGERS PER VEHICLE	CITY LIMO	CITY TAXI	SUB LIMO	SUB TAXI	TOTAL
1	11 (42%)	112 (33%)	18 (19%)	19 (26%)	160 (30%)
2	8 (31%)	156 (46%)	22 (24%)	30 (40%)	216 (41%)
3	3 (12%)	36 (11%)	33 (35%)	9 (12%)	81 (15%)
4+	4 (15%)	36 (11%)	20 (22%)	16 (22%)	76 (14%)
TOTAL	26 ( 4.9%)	340 (63.8%)	93 (17.4%)	74 (13.9%)	533 (100%)

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Table B11: NUMBER OF VEHICLES EXITING THE LOWER ROADWAY BY HOUR

HOUR	AUTOS	OTHERS	HOTEL/MOTEL COURTESY CAR	RENTAL CAR SHUTTLES	AIRPORT SHUTTLE BUS	COMM BUS CTA, RTA, ETC.
7:00 AM	266	35	45	76	22	14
8:00 AM	369	50	51	108	18	20
9:00 AM	582	62	44	111	21	19
10:00 AM	663	61	40	110	30	16
11:00 AM	504	48	43	104	25	18
12:00 NOON	623	44	32	79	17	11
1:00 PM	780	52	46	95	29	20
2:00 PM	779	40	41	79	37	31
3:00 PM	812	61	60	88	25	30
4:00 PM	719	27	45	92	14	25
5:00 PM	976	30	53	98	20	21
6:00 PM	1195	36	51	76	18	24
7:00 PM	1179	26	47	79	17	24
8:00 PM	970	34	46	69	20	21
9:00 PM	973	23	53	69	8	13
TOTAL	11390	629	697	1333	321	307

NOTE: Table does not contain those vehicles using the roadway for the International Terminal (Terminal 4) Roadway.

Friday, August 23, 1985.

Table B12: NUMBER OF VEHICLES EXITING THE  
INTERNATIONAL TERMINAL ROADWAY

HOUR	AUTOS	OTHERS	HOTEL/MOTEL COURTESY CAR	RENTAL CAR SHUTTLES	AIRPORT SHUTTLE BUS	COMM BUS CTA, RTA, ETC.
7:00 AM	94	14	9	3	13	4
8:00 AM	115	24	6	9	15	5
9:00 AM	111	31	9	5	12	9
10:00 AM	84	20	10	7	13	5
11:00 AM	91	24	5	5	13	5
12:00 NOON	75	18	15	8	12	8
1:00 PM	154	23	11	13	13	10
2:00 PM	196	10	11	17	13	11
3:00 PM	232	19	22	13	13	6
4:00 PM	324	16	12	10	15	16
5:00 PM	363	14	32	10	16	5
6:00 PM	236	10	16	5	11	13
7:00 PM	252	13	11	7	10	12
8:00 PM	161	13	13	7	13	3
9:00 PM	166	16	16	5	11	1
15 HOUR TOTAL	2654	265	198	124	193	113

Friday, August 23, 1985.

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Table B13: PASSENGER LOADS FOR  
AUTOMOBILES EXITING THE LOWER ROADWAY

HOUR	NUMBER of OCCUPANTS					TOTAL
	1	2	3	4	5+	
7:00 AM	148	68	27	11	12	266
8:00 AM	234	84	35	10	6	369
9:00 AM	397	122	39	13	11	582
10:00 AM	445	126	61	21	10	663
11:00 AM	275	153	49	24	3	504
12:00 NOON	344	169	82	19	9	623
1:00 PM	450	200	68	41	21	780
2:00 PM	445	180	101	36	17	779
3:00 PM	303	248	131	62	68	812
4:00 PM	427	183	64	35	10	719
5:00 PM	572	261	79	44	20	976
6:00 PM	625	366	127	56	21	1195
7:00 PM	661	316	120	59	23	1179
8:00 PM	528	270	91	56	25	970
9:00 PM	518	262	109	61	23	973
TOTAL	6372	3008	1183	548	279	11390

PASSENGERS PER VEHICLE INCLUDING DRIVER ONLY VEHICLES = 1.714

PASSENGERS PER VEHICLE EXCLUDING DRIVER ONLY VEHICLES = 2.621

NOTE: Table excludes those Automobiles Traversing the International  
Terminal (Terminal 4) Roadway.

Friday, August 23, 1985.

Table B14: PASSENGER LOADS FOR AUTOMOBILES  
EXITING THE INTERNATIONAL TERMINAL ROADWAY

HOUR	N U M B E R   o f   O C C U P A N T S					TOTAL
	1	2	3	4	5+	
7:00 AM	55	27	7	1	4	94
8:00 AM	78	27	8	1	1	115
9:00 AM	64	27	15	3	2	111
10:00 AM	56	14	11	2	1	84
11:00 AM	48	31	9	3	0	91
12:00 NOON	46	18	5	6	0	75
1:00 PM	93	34	10	9	8	154
2:00 PM	114	56	15	8	3	196
3:00 PM	149	51	18	9	5	232
4:00 PM	218	57	23	17	9	324
5:00 PM	184	100	50	20	9	363
6:00 PM	121	67	29	12	7	236
7:00 PM	162	62	16	7	5	252
8:00 PM	67	46	18	23	7	161
9:00 PM	82	50	18	12	4	166
	1537	667	252	133	65	2654

PASSENGER PER VEHICLE INCLUDING DRIVER ONLY VEHICLES = 1.689

PASSENGER PER VEHICLE EXCLUDING DRIVER ONLY VEHICLES = 2.638

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